Period 6 Exercise Answers

E.1 **In a closed container the motion of the molecules of a gas at room temperature is an example of**

a) static order.
b) static disorder.
c) dynamic order.
d) dynamic disorder.

E.1 = d

E.2 **Which of the following statements about the entropy of a system is NOT correct?**

a) It is a measure of the disorder of the system.

b) It will increase or remain the same if the system is left to itself.

c) It is the same as the energy of the system.

d) It can be decreased if energy is added to the system.

e) It can be increased without changing the temperature of the system.

E.2 = c

E.3 **The entropy of one gram of liquid water at 0 °C is _____ one gram of ice at 0 °C.**

a) greater than
b) less than
c) the same as

E.3 = a

E.4 **When the amount of disorder associated with a system increases, the entropy of the system**

a) increases.
b) decreases.
c) may increase or decrease.
d) remains the same.

E.4 = a

E.5 When a closed system is left to itself, the entropy of that system will

a) always increase.
b) always decrease.
c) always increase or remain the same.
d) always decrease or remain the same.
e) increase or decrease at random.

E.5 = c

E.6 Which of the following is NOT a statement of the second law of thermodynamics?

a) Any system when left to itself tends toward equilibrium with its surroundings.

b) A change of a system from its equilibrium situation involves an increase in entropy of the system.

c) The entropy of a system that is in equilibrium with its surroundings remains constant.

d) It requires energy to change a system from its equilibrium situation.

e) ALL of the above are statements of the Second Law of Thermodynamics.

E.6 = b

Period 6 Answers

E.1 = d

E.2 = c

E.3 = a

E.4 = a

E.5 = c

E.6 = b